



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,653	10/15/2003	Chuan-Pei Yu	AUOP0022USA	2652
27765	7590	10/26/2005	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			HAN, JASON	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,653

Applicant(s)

YU ET AL.

Examiner

Jason M. Han

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6,9 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,9 and 11-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20050907.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 7, 2005 has been entered.

The following claims have been rejected in light of the specification, but rendered the broadest interpretation as construed by the Examiner [MPEP 2111].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 6, 9, 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (JP 2002298629 A) in view of Pelka et al. (U.S. Patent 6134092).
3. With regards to Claim 1, Shimizu discloses a backlight module including:
 - A plurality of point light source generators being light emitting diodes (LEDs)[Figure 1: (1)];

Art Unit: 2875

- A diffusing plate [Figure 1: (2)] installed atop the plurality of point light source generators for scattering light generated by the plurality of point light source generators, whereby the diffusing plate further includes a plurality of scattering particles formed inside the diffusing plate to uniform the light generated by the point light sources [Detailed Description – Paragraph 11];
- A plurality of scattering apertures [Figure 1: (4)] installed on the surface of the diffusing plate opposite to the plurality of light source generators, wherein a scattering pattern is disposed over the inner wall of at least one scattering aperture [Figure 1b: note different patterns/shapes (4)];
- Wherein the number of the scattering apertures correspond to the number of the point light source generators, and the position of each scattering aperture corresponds to the position of each point light source generator [Figure 1].

Shimizu does not specifically teach a diffusing sheet installed above the diffusing plate for diffusing the light emitted from the diffusing plate.

Pelka teaches a backlight module including a diffusing sheet/waveguide [Figure 2: (46)] installed above a diffusing plate/light guide [Figure 2: (44)] so as to further diffuse the light.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the backlight module of Shimizu to incorporate the diffusing sheet of Pelka above the diffusing plate, so as to provide a more uniform illumination.

Art Unit: 2875

4. With regards to Claim 6, Shimizu in view of Pelka discloses the claimed invention as cited above. In addition, Shimizu teaches each of the plurality of scattering apertures being circular, rectangular, or trapezoidal in shape [Figure 1: (4)].

5. With regards to Claim 9, Shimizu in view of Pelka discloses the claimed invention as cited above. In addition, Shimizu teaches the plurality of scattering patterns including a plurality of V-trenches or a plurality of arc trenches[Figure 1c: (4)].

6. With regard to Claims 11-12, Shimizu in view of Pelka discloses the claimed invention as cited above, whereby Shimizu does not specifically teach at least one prism sheet installed above the diffusing sheet for uniforming the light diffused by said sheet (re: Claim 11); nor teaches at least one brightness enhancement film installed above the diffusing plate for enhancing brightness of the backlight module (re: Claim 12).

Pelka teaches at least one prism sheet [Figure 12: (108); Column 8, Line 3] installed above a diffusing sheet [Figure 12: (110)] to uniform the light diffused by the diffusing sheet, as well as at least one brightness enhancement film [Figure 12: (108); Column 8, Lines 4-7] installed above the diffusing plate for enhancing the brightness of the backlight module.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the backlight module of Shimizu to incorporate the prism sheet and brightness enhancement film of Pelka, so as to improve efficiency via uniform illumination and improved brightness.

Art Unit: 2875

7. With regards to Claim 13, Shimizu in view of Pelka discloses the claimed invention as cited above. In addition, Shimizu teaches a plate [Figure 1: (3)] installed under the plurality of point light source generators, but does not specifically teach said plate being reflective for reflecting the light generated by the plurality of point light source generators to the diffusing plate.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the plate (3) of Shimizu out of a reflective material, since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. In this case, providing the plate (3) out of a reflective material is commonly seen within the art and would enhance efficiency of the backlight module via utilizing most illumination in the appropriate forward direction.

8. With regard to Claims 14-16, Shimizu in view of Pelka discloses the claimed invention as cited above, but does not specifically teach each of the inner walls of the scattering apertures having a scattering pattern (re: Claim 14); the scattering patterns disposed over the inner walls being the same pattern (re: Claim 15), nor different patterns (re: Claim 16).

Pelka teaches scattering patterns disposed over inner walls implicitly being either the same pattern (e.g., same coating) or different pattern (e.g., various coatings) [Figures 3-4: (65); Column 4, Lines 37-54].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the backlight module of Shimizu to incorporate the various (e.g.,

Art Unit: 2875

same or different) scattering patterns disposed over the inner walls, as taught by Pelka, in order to achieve a desired optical effect on the illumination.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (JP 2002298629 A) in view of Pelka et al. (U.S. Patent 6134092).

Shimizu discloses a backlight module including:

- A plurality of point light source generators [Figure 1: (1)];
- A diffusing plate [Figure 1: (2)] installed atop the plurality of point light source generators for scattering light generated by the plurality of point light source generators, whereby the diffusing plate further includes a plurality of scattering particles formed inside the diffusing plate to uniform the light generated by the point light sources [Detailed Description – Paragraph 11]; and
- A plurality of scattering apertures [Figure 1: (4)] installed on the surface of the diffusing plate opposite to the plurality of light source generators, wherein a scattering pattern is disposed over the inner wall of at least one scattering aperture [Figure 1b: note different patterns/shapes (4)].

Shimizu does not specifically teach a diffusing sheet installed above the diffusing plate for diffusing the light emitted from the diffusing plate.

Pelka teaches a backlight module including a diffusing sheet/waveguide [Figure 2: (46)] installed above a diffusing plate/light guide [Figure 2: (44)] so as to further diffuse the light.

Art Unit: 2875

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the backlight module of Shimizu to incorporate the diffusing sheet of Pelka above the diffusing plate, so as to provide a more uniform illumination.

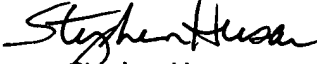
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH (10/21/2005)


Stephen Husar
Primary Examiner